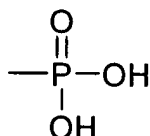


WHAT IS CLAIMED IS:

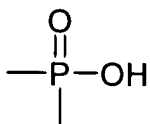
- 1) A paint formulation comprising:
 - a) at least 0.1 wt.% of hectorite clay; and
 - b) from about 0.5 to 15 wt.% based on the weight of the hectorite clay of one or more phosphonate additives; and
 - c) water.
- 2) A formulation according to Claim 1, wherein the hectorite is selected from the group consisting of calcium hectorite and sodium hectorite.
- 3) The formulation according to Claim 1, wherein the hectorite is sodium hectorite.
- 4) The formulation according to Claim 1, wherein the hectorite clay and phosphonate additive were added to the formulation as a mixture.
- 5) The paint formulation according to Claim 1, wherein the phosphonate additive is selected from the group consisting of:

- (a) Phosphonic acid compounds that contain at least two moieties having the structure:



and salts thereof,

- (b) Phosphinic acid compounds that contain at least two moieties having the structure:



and salts thereof,

- (c) Compounds which may form phosphonic or phosphinic acids, or salts thereof, under the conditions of use in making these paint formulations, and
 - (d) The lithium, sodium, potassium, calcium or magnesium salts of the compounds described under (a) and (b).
- 6) The paint formulation according to Claim 1, further comprising an alkali swellable - rheological additive.
- 7) The formulation according to Claim 1 wherein the hectorite is sodium hectorite and the phosphonate compound is selected from the group consisting of:
- a) Diphosphonic acids of formula $R^1R^2C(PO(OH)_2)_2$ and salts thereof,
 - b) Diphosphonic acids of formula $R^1-CR^2(PO(OH)_2)-R^3-CR^2PO(OH)_2-R^5$ and salts thereof,
 - c) Phosphonic acids with general formula $R^1R^4C=C(PO(OH)_2)_2$ and salts thereof, and
 - d) The lithium, sodium, potassium, calcium and magnesium salts of the compounds described under a), b) and c),
- where R^1 can be selected from the group comprising H, a linear or branched alkyl, alkene, hydroxyalkyl, aminoalkyl, hydroxyalkene, aminoalkene with 1 to 22 carbon atoms or an aryl, hydroxyaryl, aminoaryl with 6 to 22 carbon atoms; R^2 can be selected from the group comprising R^1 and OH; R^3 is an alkyl with 0 to 22 carbon atoms; and both R^4 and R^5 can be selected from the group R^1 .
- 8) The formulation according to Claim 1, wherein the phosphonate additive is selected from the group consisting of 1-hydroxyethylene-1,1-diphosphonic acid sodium salt or an ester thereof.
- 9) The formulation according to Claim 8, wherein the hectorite is sodium hectorite.
- 10) A paint formulation comprising:
- a) about 0.1 to 10 wt.% hectorite clay; and

- b) about 0.5 to 6 wt.% based on the weight of the hectorite clay of one or more phosphonate additives; and
 - c) water.
- 11) The paint formulation according to Claim 10, wherein the hectorite is selected from the group consisting of calcium hectorite and sodium hectorite and the formulation contains a rheological additive.
- 12) The paint formulation according to Claim 10, where the phosphonate additive is selected from the group consisting of a 1-hydroxyethylene-1,1-diphosphonic acid, a salt thereof and an ester thereof.
- 13) A method of making a paint formulation, comprising:
 - a) treating a mixture of hectorite and water with one or more phosphonate additives; and
 - b) adding such treated mixture to the paint formulation.
- 14) A method of making a paint formulation, comprising:
 - a) treating a mixture of hectorite and water with one or more phosphonate additives to form a clay slurry; and
 - b) drying the treated mixture; and
 - c) adding such treated mixture to the paint formulation.
- 15) The method according to Claim 14, wherein the hectorite is sodium hectorite and the hectorite clay and phosphonate additive are added as a mixture.
- 16) A method of making a paint formulation, comprising:
 - a) treating a mixture of hectorite and water with one or more phosphonate additives to form a clay slurry; and
 - b) drying the treated mixture; and
 - c) adding such treated mixture to the paint formulation as a pregel in water.

- 17) A method according to Claim 16, wherein the phosphonate additive is 1-hydroxyethylene-1,1-diphosphonic acid tetra sodium salt.
- 18) An automotive paint formulation comprising:
- a) at least 0.1% of a chemical selected from the group consisting of hectorite clay and synthetic hectorite clay;
 - b) from about 0.5 to 15 wt.% based on the weight of clay of one or more phosphonate additives; and
 - c) water.
- 19) The paint formulation of Claim 18 wherein the clay, phosphonate and water were added as a pregel during the batch making process.
- 20) The paint formulation of Claim 18 wherein the clay, phosphonate and water were added as a pregel or as a post-correction additive.
- 21) The paint formulation of claim 18 wherein the clay and the phosphonate additive were added to the formulation as a mixture.
- 22) The paint formulation of Claim 18 further comprising an alkali swellable rheological additive.
- 23) An automotive metallic paint formulation comprising:
- a) at least 0.1% of a chemical selected from the group consisting of hectorite clay and synthetic hectorite clay; and
 - b) from about 0.5 to 15 wt.% based on the weight of clay of one or more phosphonate additives;
 - c) metallic flakes selected from the group consisting of aluminum, copper, mica, or interference pigments and mixtures thereof; and
 - d) water.

- 24) The metallic paint formulation of Claim 23 wherein the clay, phosphonate and water were added as a pregel during the batch making process.
- 25) The metallic paint formulation of Claim 23 wherein the clay, phosphonate and water were added as a pregel or as a post-correction additive.
- 26) The metallic paint formulation of Claim 23 further comprising an alkali swellable chemical.
- 27) The metallic paint formulation of claim 23 wherein the clay and the phosphonate additive were added to the formulation as a mixture.
- 28) A spray metallic paint formulation comprising:
- a) at least 0.1% of a chemical selected from the group consisting of hectorite clay; and synthetic hectorite clay; and
 - b) from about 0.5 to 15 wt.% based on the weight of clay of one or more phosphonate additives;
 - c) aluminum metallic flakes, copper, mica, or interference pigments and mixtures thereof; and
 - d) water.
- 29) The spray metallic paint formulation of Claim 28 wherein the clay, phosphonate and water were added as a pregel during the batch making process.
- 30) The spray metallic paint formulation of Claim 28 wherein the clay, phosphonate and water were added as a pregel as a post-correction additive.
- 31) The spray metallic paint formulation of Claim 28 further comprising an alkali swellable chemical.
- 32) The spray metallic formulation of claim 28 wherein the clay and the phosphonate additive were added to the formulation as a mixture.